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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,959	08/26/2003	David Cheung	003032/C7/DSM/LOW K	5142

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EXAMINER	
LE, THAO P	

ART UNIT	PAPER NUMBER
2818	

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/647,959	CHEUNG ET AL.	
	Examiner	Art Unit	
	Thao P Le	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08/26/03* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) submitted on 12/8/03
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

_____.

DETAILED ACTION

Oath/Declaration

1. The oath/declaration filed on 8/26/03 is acceptable.

2. Claims 1-20 are pending in this application.

Information Disclosure Statement

3. The references cited on the PTOL 1449 forms of Information Disclosure Statement (IDS) submitted on **12/08/03** have been considered.

Drawings

4. The drawings are accepted by examiner.

Specification

5. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1-6 are rejected under 35 USC 102 (e) as being anticipated by Rose et al., U.S. Patent No. 6,068, 884 filed on April 28, 1998.

Note that this application does not entitle the filling date of the U.S. Patent No. 6,054,379 filed on February 11, 1998 because the Patent No. 6,054,379 did not disclose the limitations recited in present application, such as, a low dielectric constant film is formed by reacting two or more organosiloxanes, and wherein at least one of the organosiloxanes is a cyclic organosiloxane.

Regarding to claim 1, Rose et al. discloses a method of forming a low dielectric constant film on a substrate (**See Abstract, Figs. 1 and Cols. 1-14**), comprising:

. reacting two or more organosiloxanes (**lines 64-65, Col. 4; lines 49-53, Col. 5; lines 23-24, 45-49, Col. 6**) wherein at least one of the organosiloxanes is a cyclic organosiloxane (**lines 12-25, Col. 6**) comprising C, H, and O (**See Fig. 1**);

. applying RF power (**lines 1-14, Col. 7**);

. wherein the low dielectric constant film comprises silicon-carbon bonds (**Fig. 1, the Si-CH_3 bonds**) and a dielectric constant of about 3 or less (**lines 32-33, Col. 11**).

Regarding to claim 2, Rose et al. discloses the claimed limitations as applied for claim 1 above and further discloses wherein the at least one cyclic organosiloxane comprising C, H, and O comprises a ring comprising oxygen (**Fig. 1, oxygen is in the rings, and each oxygen is bonded with two silicon atoms; lines 27-29, Col. 4**).

Regarding to claim 3, Rose et al. discloses the claimed limitations as applied for claims 1 and 2 above and further discloses wherein the at least one cyclic organosiloxane comprising C, H, and O is selected from the group consisting of octamethylcyclotetrasiloxane (**OMCT, lines 18-19, Col. 6**).

Regarding to claim 4, Rose et al. discloses the claimed limitations as applied for claim 1 above and further discloses wherein the two or more organosiloxanes (**lines 64-65, Col. 4**) are selected from the group consisting of octamethylcyclotetrasiloxane (**OMCT, lines 18-19, Col. 6**).

Regarding to claim 5, Rose et al. discloses the claimed limitations as applied for claim 1 above and further discloses wherein the two or more organosiloxanes are reacted with an oxidizing gas (**lines 12-14, Col. 7; lines 19-20, Col. 9; oxygen used as plasma gas source in CVD is inherently oxidizing gas**).

Regarding to claim 6, Rose et al. discloses the claimed limitations as applied for claims 1 and 5 above and further discloses wherein the oxidizing gas is selected from the group consisting of oxygen (**lines 12-14, Col. 7; lines 19-20, Col. 9**).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al., U. Patent No. 6,068,884 as applied to claim 1 above, and in view of Grill et al., U.S. Patent No. 6,147,009.

Regarding to claim 7, Rose et al. discloses a method of forming a low dielectric constant film on a substrate (**See Abstract, Figs. 1 and Cols. 1-14**), comprising:

. reacting two or more organosiloxanes (**lines 64-65, Col. 4; lines 49-53, Col. 5; lines 23-24, 45-49, Col. 6**) wherein at least one of the organosiloxanes is a cyclic organosiloxane (**lines 12-25, Col. 6**) comprising C, H, and O (**See Fig. 1**);

. applying RF power (**lines 1-14, Col. 7**);

. wherein the low dielectric constant film comprises silicon-carbon bonds (**Fig. 1, the Si-CH_3 bonds**) and a dielectric constant of about 3 or less (**lines 32-33, Col. 11**).

However, Rose et al. fails to disclose wherein the RF power to form plasma is pulsed.

Grill et al. dislcoses a method of forming a low dielectric constant film on a substrate including applying RF power wherein the RF power is pulsed (**lines 34-40, Col. 5**).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply pulsed RF power as taught by Grill et al. in the method of Rose et al. **because** when the plasma formed by RF power whereas the RF power is pulse, a film having a porous structure and low dielectric constant can effectively be formed. By introducing an oxidizing gas in a pulse, the sum of introduced oxidizing gas can be increased. That is, if the flow of oxidizing gas increases, dust (nano-particles) increases, causing a plasma to be unstable due to an increase in reactivity. By introducing an oxidizing gas in a pulse cycle, it is possible to increase the flow of oxidizing gas while suppressing the formation of dust (nano-particles) or stopping the

growth of it at some size of the dust. Regardless of the amount of introduced oxidizing gas, having the RF power is pulse to make a plasma stable and suppress the growth of nano-particles, therefore, a film having a porous structure and low dielectric constant can effectively be formed.

10. Claims 8, 11, 12, 14 are rejected under 35 USC 102 (e) as being anticipated by Rose et al., U.S. Patent No. 6,068, 884 filed on April 28, 1998.

Regarding to claim 8, Rose et al. discloses a method of forming a low dielectric constant film on a substrate (**See Abstract, Figs. 1 and Cols. 1-14**), comprising:

. reacting two or more organosilanes (**lines 64-65, Col. 4; lines 49-53, Col. 5; lines 23-24, 45-49, Col. 6; TEOS and TMS are organosilane**) wherein at least one of the organosilanes is a cyclic organosilane (**lines 12-25, Col. 6**);

. applying RF power (**lines 1-14, Col. 7**);

. wherein the low dielectric constant film comprises silicon-carbon bonds (**Fig. 1, the Si-CH_3 bonds**) and a dielectric constant of about 3 or less (**lines 32-33, Col. 11**).

Regarding to claim 11, Rose et al. discloses the claimed limitations as applied for claim 8 above and further discloses wherein the two or more organosilanes are reacted with an oxidizing gas (**lines 12-14, Col. 7; lines 19-20, Col. 9; oxygen used as plasma gas source in CVD is inherently oxidizing gas**).

Regarding to claim 12, Rose et al. discloses the claimed limitations as applied for claims 8 and 11 above and further discloses wherein the oxidizing gas is selected from the group consisting of oxygen (**lines 12-14, Col. 7; lines 19-20, Col. 9**).

Regarding to claim 14, Rose et al. discloses the claimed limitations as applied for claim 8 above and further discloses wherein at least one of the two or more organosilanes comprises oxygen (**TEOS, lines 52, Col. 5**).

11. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al., U. Patent No. 6,068,884.

Regarding to claim 10, Rose et al. discloses a method of forming a low dielectric constant film on a substrate (**See Abstract, Figs. 1 and Cols. 1-14**), comprising:

. reacting two or more organosilanes (**lines 64-65, Col. 4; lines 49-53, Col. 5; lines 23-24, 45-49, Col. 6; TEOS and TMS are organosilane**) wherein at least one of the organosilanes is a cyclic organosilane (**lines 12-25, Col. 6**) comprising C, H, and O (**See Fig. 1**);

. applying RF power (**lines 1-14, Col. 7**);

. wherein the low dielectric constant film comprises silicon-carbon bonds (**Fig. 1, the Si-CH_3 bonds**) and a dielectric constant of about 3 or less (**lines 32-33, Col. 11**).

Rose et al. does not disclose wherein the cyclic organosilane is 1,3,5-trisilane-2,4,6-trimethylene.

Thus, Rose et al. discloses that the dielectric film may consist of any suitable precursors such as cyclic organosilicon, cyclic organosilazanes, cyclic organosiloxanes (**lines 49-53, Col. 5; lines 12-25, Col. 6**).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to recognize that the cyclic organosilane disclosed in the method of Rose et al. may also include 1,3,5-trisilane-2,4,6-trimethylene because 1,3,5-trisilane-2,4,6-trimethylene belongs to cyclic organosilane group and because Rose et al. discloses that any suitable precursors such as cyclic organosilicon, cyclic organosilazanes, cyclic organosiloxanes (**lines 49-53, Col. 5; lines 12-25, Col. 6**) can be used.

Regarding to claim 10, Rose et al. discloses the claimed limitations as applied for claims 8 and 9 above, Rose et al. further discloses wherein the two or more organosilanes further comprises an organosilane selected from trimethylsilane (**TMS, lines 52, Col. 5**).

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al., U. Patent No. 6,068,884 as applied to claim 8 above, and in view of Grill et al., U.S. Patent No. 6,147,009.

Regarding to claim 13, Rose et al. discloses a method of forming a low dielectric constant film on a substrate (**See Abstract, Figs. 1 and Cols. 1-14**), comprising:

. reacting two or more organosilanes (**lines 64-65, Col. 4; lines 49-53, Col. 5; lines 23-24, 45-49, Col. 6**) wherein at least one of the organosilanes is a cyclic organosilane (**lines 12-25, Col. 6**);

. applying RF power (**lines 1-14, Col. 7**);

. wherein the low dielectric constant film comprises silicon-carbon bonds (**Fig. 1, the Si-CH_3 bonds**) and a dielectric constant of about 3 or less (**lines 32-33, Col. 11**).

However, Rose et al. fails to disclose wherein the RF power to form plasma is pulsed.

Grill et al. dislcoses a method of forming a low dielectric constant film on a substrate including applying RF power wherein the RF power is pulsed (**lines 34-40, Col. 5**).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply pulsed RF power as taught by Grill et al. in the method of Rose et al. **because** when the plasma formed by RF power whereas the RF power is pulse, a film having a porous structure and low dielectric constant can effectively be formed. By introducing an oxidizing gas in a pulse, the sum of introduced oxidizing gas can be increased. That is, if the flow of oxidizing gas increases, dust (nano-particles)

increases, causing a plasma to be unstable due to an increase in reactivity. By introducing an oxidizing gas in a pulse cycle, it is possible to increase the flow of oxidizing gas while suppressing the formation of dust (nano-particles) or stopping the growth of it at some size of the dust. Regardless of the amount of introduced oxidizing gas, having the RF power is pulse to make a plasma is stable and to suppress the growth of nano-particles, therefore, a film having a porous structure and low dielectric constant can effectively be formed.

13. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al., U. Patent No. 6,068,884.

Regarding to claim 15, Rose et al. discloses a method of forming a low dielectric constant film on a substrate (**See Abstract, Figs. 1 and Cols. 1-14**), comprising:

. reacting two or more organosiloxanes (**lines 64-65, Col. 4; lines 49-53, Col. 5; lines 23-24, 45-49, Col. 6**) wherein a first organosiloxane of the two or more organosiloxanes is a cyclic organosiloxane (**lines 12-25, Col. 6**) and comprises C, H, and O and a ring comprises oxygen (**See Fig. 1**);

. applying RF power (**lines 1-14, Col. 7**);

. wherein the low dielectric constant film comprises silicon-carbon bonds (**Fig. 1, the Si-CH_3 bonds**) and a dielectric constant of about 3 or less (**lines 32-33, Col. 11**).

However, Rose et al. fails to disclose that cyclic organosiloxane comprises a ring comprising carbon.

Thus, Rose et al. discloses that the dielectric film may consist of any suitable precursors such as cyclic organosiloxanes **(lines 49-53, Col. 5; lines 12-25, Col. 6).**

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to recognize that the cyclic organosiloxanes disclosed in the method of Rose et al. may also comprise a ring comprising carbon because Rose et al. discloses that any suitable precursors such as cyclic organosiloxanes (**lines 49-59, Col. 5; lines 12-25, Col. 6**) can be used.

Regarding to claim 16, Rose et al. discloses the claimed limitations as applied for claim 15 above but Rose et al. does not disclose wherein the cyclic organosiloxane is 1,3,5,7-tetrasilane-2,6-dioxy-4,8-dimethylene.

Thus, Rose et al. discloses that the dielectric film may consist of any suitable precursors such as cyclic organosiloxanes (**lines 49-53, Col. 5; lines 12-25, Col. 6**).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to recognize that the cyclic organosiloxane disclosed in the method of Rose et al. may also include 1,3,5,7-tetrasilane-2,6-dioxy-4,8-dimethylene because 1,3,5,7-tetrasilane-2,6-dioxy-4,8-dimethylene belongs to cyclic organosiloxane group and because Rose et al. discloses that any suitable precursors such as cyclic organosiloxanes (**lines 49-53, Col. 5; lines 12-25, Col. 6**) can be used.

Regarding to claim 17, Rose et al. discloses the claimed limitations as applied for claim 15 above, and Rose et al. further discloses wherein a organosiloxane is selected from the group consisting of 1,1,3,3,-tetramethyldisiloxane (**TMDSO, line 6, Col. 6**).

Regarding to claim 18, Rose et al. discloses the claimed limitations as applied for claim 15 above and further discloses wherein the two or more organosilanes are reacted with an oxidizing gas (**lines 12-14, Col. 7; lines 19-20, Col. 9; oxygen used as plasma gas source in CVD is inherently oxidizing gas**).

Regarding to claim 19, Rose et al. discloses the claimed limitations as applied for claims 15 and 18 above and further discloses wherein the oxidizing gas is selected from the group consisting of oxygen (**lines 12-14, Col. 7; lines 19-20, Col. 9**).

14. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al., U. Patent No. 6,068,884 as applied to claim 8 above, and in view of Grill et al., U.S. Patent No. 6,147,009.

Regarding to claim 20, Rose et al. discloses a method of forming a low dielectric constant film on a substrate (**See Abstract, Figs. 1 and Cols. 1-14**), comprising:

. reacting two or more organosilanes (**lines 64-65, Col. 4; lines 49-53, Col. 5; lines 23-24, 45-49, Col. 6**) wherein at least one of the organosilanes is a cyclic organosilane (**lines 12-25, Col. 6**);

. applying RF power (**lines 1-14, Col. 7**);

. wherein the low dielectric constant film comprises silicon-carbon bonds (**Fig. 1, the Si-CH_3 bonds**) and a dielectric constant of about 3 or less (**lines 32-33, Col. 11**).

However, Rose et al. fails to disclose wherein the RF power to form plasma is pulsed.

Grill et al. dislcoses a method of forming a low dielectric constant film on a substrate including applying RF power wherein the RF power is pulsed (**lines 34-40, Col. 5**).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply pulsed RF power as taught by Grill et al. in the method of Rose et al. **because** when the plasma formed by RF power whereas the RF power is pulse, a film having a porous structure and low dielectric constant can effectively be formed. By introducing an oxidizing gas in a pulse, the sum of introduced oxidizing gas can be increased. That is, if the flow of oxidizing gas increases, dust (nano-particles) increases, causing a plasma to be unstable due to an increase in reactivity. By introducing an oxidizing gas in a pulse cycle, it is possible to increase the flow of oxidizing gas while suppressing the formation of dust (nano-particles) or stopping the

growth of it at some size of the dust. Regardless of the amount of introduced oxidizing gas, having the RF power is pulse to make a plasma stable and to suppress the growth of nano-particles, therefore, a film having a porous structure and low dielectric constant can effectively be formed.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

16. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claims 1 and 3 of Patent No. 6,537,929.** Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims seem to differ from U.S. Patent No. **6,537,929** in that the claimed invention of the instant application recites "a method for depositing a low dielectric constant film on a substrate comprising reacting two or more organosilanes or organosiloxanes wherein at least one of the organosilanes or organosiloxanes is a cyclic organosilane or organosiloxane comprising C, H, and O while applying RF power wherein the low dielectric constant film comprises silicon-carbon bonds and a dielectric constant of about 3 or less" while the U.S. Patent No. **6,537,929** claimed "a method for depositing a low dielectric constant film on a substrate comprising reacting two or more organosilanes or organosiloxanes while applying RF power wherein the low dielectric constant film comprises silicon-carbon bonds and a dielectric constant of about 3 or less (claim 1) and wherein the organosilane or organosiloxane compound is selected from a group consisting of 2,4,6,8-tetramethlcyclotetrasiloxane, 2,4,6,8,10-pentamethylcyclo pentasiloxane ...(claim 3)"

It would have been obvious to one having ordinary skill in the art at the time the invention was made to recognize that 2,4,6,8-tetramethlcyclotetrasiloxane, 2,4,6,8,10-pentamethylcyclo pentasiloxane compounds comprise C, H, and O and a ring (cyclic).

18. Claims 1-2, 4-6, 8-12, 14,15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheung et al., U.S. Patent No. 6,537,929.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filling date of the reference, it constitutes prior art under 35 U.S.C 102(e). This rejection under 35 U.S.C 102 (e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another" or by an appropriate showing under 37 CFR 1.131.

Regarding to claim 1, Cheung et al. discloses a method for depositing a low dielectric constant film on a substrate, comprising reacting two or more organosiloxanes while applying RF power, wherein the low dielectric constant film comprises silicon-carbon bonds and a dielectric constant of about 3 or less (**lines 61-67, Col. 17**). Cheung et al. further discloses that wherein at least one of the organosiloxanes is selected from a group consisting of, for example, 2,4,6,8-tetramethlcyclotetrasiloxane, 2,4,6,8,10-pentamethylcyclo pentasiloxane (**lines 11-14, Col. 18**). It is inherent that 2,4,6,8-tetramethylcyclotetrasiloxane, and 2,4,6,8,10-pentamethylcyclo pentasiloxane are cyclic organosiloxanes and they all comprise C, H, and O (**lines 10-35, Col. 6**).

Regarding to claim 2, Cheung et al. discloses that at least one of cyclic organosiloxane is selected from a group consisting of 2,4,6,8-tetramethlcyclotetrasiloxane, 2,4,6,8,10-pentamethylcyclo pentasiloxane (**lines 11-14, Col. 18**). It is inherent that 2,4,6,8-tetramethlcyclotetrasiloxane and 2,4,6,8,10-

pentamethylcyclo pentasiloxane comprise C, H, and O and a ring comprising oxygen (**See Col. 6, lines 12-34**).

Regarding to claim 4, Cheung et al. discloses that wherein two or more organosiloxanes are selected from the group consisting of 1,3,5,7-tetrasilano-2,6-dioxy-4,8-dimethylene ((**lines 13-15, Col. 18**).

Regarding to claims 5-6, Cheung et al. discloses wherein two or more organosiloxanes are teacted with an oxidizing gas and the oxidizing gas is selected from the group consisting of nitrous oxide, ozone (**lines 35-67, Col. 6; lines 15-16, Col. 18**).

Regarding to claim 8, Cheung et al. discloses a method for depositing a low dielectric constant film on a substrate comprising reacting two or more organosilanes, wherein at least one of the organosilanes is a cyclic organosilane, while applying RF power, wherein the low dielectric constant film comprises silicon-carbon bonds and a dielectric constant of about 3 or less (**claims 1, 3, lines 61-67, Col. 17; lines 5-16, Col. 18**).

Regarding to claim 9, Cheung et al. discloses wherein the cyclic organosilane is 1,3,5-trisilano-2,4,6-trimethylene (**line 9, Col. 18**).

Regarding to claim 10, Cheung et al. discloses wherein two or more organosilanes further comprise an organosilane selected from the group consisting of methylsilane, dimethylsilane (**lines 5-6, Col. 18**).

Regarding to claims 11-12, Cheung et al. discloses wherein two or more organosiloxanes are teacted with an oxidizing gas and the oxidizing gas is selected

from the group consisting of oxygen, nitrous oxide, ozone (**lines 35-67, Col. 6; lines 15-16, Col. 18**).

Regarding to claim 14, Cheung et al. discloses wherein at least one of the two or more organosilanes comprises oxygen (**2,4,6,8-tetramethylcyclotetrasiloxane, lines 11-12, Col. 18**).

Regarding to claims 15, Cheung et al. discloses a method for depositing a low dielectric constant film on a substrate comprising reacting two or more organosiloxanes, wherein a first organosiloxane is cyclic and comprises C, H, and O and a ring comprising carbon and oxygen (**2,4,6,8-tetramethlcyclotetrasiloxane, 2,4,6,8,10-pentamethylcyclo pentasiloxane, lines 11-14, Col. 18**), while applying RF power, wherein the low dielectric constant film comprises silicon-carbon bonds and a dielectric constant of about 3 or less (**lines 60-67, Col. 17; lines 4-15, Col. 18**).

Regarding to claim 16, Cheung et al. discloses wherein the cyclic organosilane is 1,3,5-trisilano-2,4,6-trimethylene (**line 9, Col. 18**).

Regarding to claim 17, Cheung et al. discloses wherein a second organosiloxane of the two or more organosiloxanes is selected from the group consisting of 2,2-bis(1-methyldisiloxanyl)propane (**lines 10-11, Col. 18**).

Regarding to claims 18-19, Cheung et al. discloses wherein two or more organosiloxanes are teacted with an oxidizing gas and the oxidizing gas is selected from the group consisting of oxygen, nitrous oxide, and ozone (**lines 35-67, Col. 6; lines 15-16, Col. 18**).

19. When responding to the office action, Applicants' are advice to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure..

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao P Le whose telephone number is 571-272-1785. The examiner can normally be reached on M-T (8:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thao P. Le
Art Unit 2818